

# Contract Record

ESTABLISHED 1866

## and Engineering Review

A National Journal for the Construction Interests of Canada,  
reaching Architects, Engineers, Contractors,  
Municipal Officials, etc.

Published Each Wednesday by

**HUGH C. MACLEAN, LIMITED**

THOMAS S. YOUNG, Managing Director

HEAD OFFICE - 347 Adelaide Street West, TORONTO  
Telephone A. 2700



MONTREAL - 119 Board of Trade Bldg.  
WINNIPEG - - - Electric Ry. Chambers  
VANCOUVER - - - - - Winch Building  
NEW YORK - - - - - 309 Broadway  
CHICAGO - - - - - 1413 Gt. Northern Bldg.  
LONDON, ENG. - - - 16 Regent Street S.W.

### SUBSCRIPTION RATES

Canada and Great Britain, \$2.00. U. S. and Foreign, \$3.00.  
Single copies 10 cents.

Authorized by the Postmaster General for Canada, for transmission  
as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at  
Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 35 February 25, 1920 No. 8

### Principal Contents

	Page
Sewage System for Mowat Sanatorium Uses Imhoff Tank and Sprinkling Filter. . . . .	170
Activities of Dominion Town Planning Branch . . . .	172
Canadian Marble Resources Being Neglected . . . .	174
Ontario Land Surveyors Hold Convention . . . . .	175
General Features of Bituminous Roads . . . . .	177
Manchester's Experience with Activated Sludge . . . .	180
Hints for the Contractor . . . . .	183
Mainly Constructional . . . . .	188

### Immediate Action Needed To Reduce Canada's \$2.90 Per Capita Fire Loss

**R**ECORD-BREAKING, while a commendable enough procedure in some connections, is grossly misapplied when fire losses are concerned. In this regard, however, Canada seems year by year to be breaking new records, striving, to all appearances, to maintain its position at the top—or shall we preferably say, the bottom—of the list. The per capita fire loss in Canada is notoriously high—the highest in the world and, in spite of every attempt of propaganda to demonstrate the wantonness and wastefulness of our neglect and carelessness, this loss is not mitigated as the years go by. Even when the fire demon himself brings right home to us the loss of life, of employment, of created property, of material resources and of commercial prosperity, that follow in his wake, we scarcely heed, much less profit by the lesson. With twenty-three and a half millions gone up in smoke in 1919, we can hardly be

## Activities of Dominion Town Planning Branch

Report to  
Commission of Conservation

by **Thomas Adams**

at 11th annual meeting of the  
Commission of Conservation in Montreal,  
Canada

February 1920

### Municipalities Get More Power Under Amended Quebec Housing Act

**T**HE Quebec Government's scheme for erecting workmen's dwellings and providing garden cities has proved unworkable, and is to be discarded. The Government Housing Act contained clauses dealing with the loan of monies to various cities and towns, and also the class of house to be constructed. Under this act a technical commission was appointed, consisting of a director, architect, sanitary expert, and landscape architect. The commission, whose duties were to pass on all schemes, draw plans, and generally carry out the objects of the act, the expenses being met by a levy of 2½ per cent, on the amount of the loan to the town or city.

There were numerous applications for loans, but very little was done in the way of actually carrying out the act. The restrictions were found in practice to be very onerous, and Montreal in particular raised serious objections, not only to the tax imposed by the technical commission, but also to the regulations governing the class of houses to be built. To meet these objections, the Quebec Government has introduced an amending Bill, which alters the previous act very radically, and abolishes the technical commission.

In the place of the former machinery, the Government will simply allot the amount of the Federal grant to the municipalities, and leave to each municipality the absolute control of the construction of the dwellings and the full responsibility. The municipalities will in turn be able to make loans to individuals or housing companies. The Government are of the opinion that it will be an almost impossible task to look after the construction of houses in perhaps 100 or 200 cities and towns. They will, however, advance sums of money to the municipalities, in return for which the municipalities will give the Government its bonds at 5 per cent., taken at par.

Provision is made in the bill whereby the municipalities, for their greater protection, may have the land



through the filtering stone. However this will depend on the quality of the effluent.

The sludge bed was excavated in the natural ground to a depth of four feet and made with natural sloped embankments. It has an area of 400 square feet and the depth of the filtering material is 3 feet. This material consists of a mixture of fine broken stone and gravel, covered with a 6-in. layer of sand. On the bottom were laid 3-inch field tiles placed 2 ft. apart. The sludge is carried to the drying bed through a vitrified clay pipe.

The cost of the entire system was \$11,800, and includes the building of 2,600 lin. ft. of 6 in. sewer, 1,600 lin. ft. of ditch for surface water, and the build-

ing of the tanks, etc., as follows: 590 cu. yds. of rock excavation; 1,044 cu. yds. of earth excavation; 1,100 cu. yds. of back filling (earth and stone); hauling 275 cu. yds. of excavated rock 1,500 feet away; 2,600 lin. ft. of sewer trench, part 7 ft. deep in rock; 1,600 lin. ft. of trench 18 in. deep for surface water; 11 concrete manholes; the reinforced concrete tank and filter house and sludge bed. The excavation for septic tank, 18 ft. in depth, was in solid rock. In that cost of \$11,800 is not included the salary of the engineer in charge.

The writer had charge of the design and the building of the system under the direction of Mr. S. J. Chappleau, C.E., district engineer.

## Activities of Dominion Town Planning Branch

### Report to Commission of Conservation Gives Account of Past Year's Accomplishments and This Year's Prospects

THE following account of the work of the Town Planning Branch of the Commission of Conservation for the past year was given by Mr. Adams before the Commission of Conservation at the eleventh annual meeting held in Montreal Feb. 18 to 20.

#### Legislation

An Act was drafted for Quebec Province which passed a first reading the last session and is still under consideration of the Government.

A special Draft was also prepared for revising the Ontario Act to meet the needs of the large cities and towns.

A draft Act was prepared for British Columbia and has been submitted to the Government.

Different sets of regulations under town planning legislation have been prepared or reviewed during the year. Provisions of St. John and Halifax Town Planning schemes have been revised and are now about ready for presentation to the provincial governments.

Proposals have been made to the cities of Edmonton, Calgary, Lethbridge and Medicine Hat as to the special provision necessary to deal with their somewhat unique conditions under town planning schemes.

#### Housing Legislation and Administration

Under the Order in Council of 12th December last the Town Planning Adviser of the Commission was asked to give assistance and co-operation to the Housing Committee of the Cabinet to carry on the work of the Committee in administering the housing loan of \$25,000,000 granted under the general housing project of the Federal Government. A large part of the time during the past year has been given to this work with the assistance of a special staff appointed by the Housing Committee of the Cabinet.

#### General Town Planning Schemes

General advice has been given to the cities all over the country in connection with proposals to prepare town planning schemes. Meetings have been held or visits paid to cities in all the provinces. Considerable progress has been made with plans for several cities, including St. John, Halifax, Borden (P.E.I.), Hamilton, London, Ottawa, Calgary and other smaller cities.

A housing report has been advanced towards the

stage of being nearly ready for publication and a report on regional planning was completed. A report on industrial decentralization in large cities is under preparation, after a considerable amount of research in Toronto and Montreal by Captain Ferguson, M.E.I.C.

Reports have also been prepared on the surveying of curves by Mr. H. L. Seymour, A.M.E.I.C., and on comparative conditions of assessment and taxation in different cities by Mr. A. G. Dalzell, A.M.E.I.C., and on several incidental questions such as sunlight engineering.

Plans for different cities and housing schemes have involved preliminary study of underlying factors.

#### Educational Work

Meetings have been held in numerous cities and several papers have been prepared for conferences. The Branch continues to lend slides and typewritten lectures and to prepare material for many publications, including "Conservation of Life."

#### Expert Advice to Government Departments

During the past year the Town Planning Adviser has been acting in an advisory capacity to the Department of Public Works in connection with the planning of the sites for public buildings in Ottawa and in respect of other matters.

In connection with the Housing Committee of the Cabinet a number of designs for houses have been prepared by Mr. W. D. Cromarty and Mr. B. Evan-Parry including a special design for soldiers suffering from tuberculosis and one for a farm house for the Soldiers' Settlement Board.

The Town Planning Adviser has also reported on the question of erecting wooden houses in England to the Department of Trade and Commerce.

Consideration has been given to the preparation of aerial maps of cities and towns, of topographical maps by Government departments.

#### General Correspondence and Advisory Work

Correspondence has been received from all parts of Canada and from Government and other departments in United States, Australia, England, Holland, Central Africa and elsewhere regarding town planning legislation and schemes. This part of the work



continues to increase and make a large demand on the staff of the office.

## WORK FOR THE PRESENT YEAR

### Legislation

Town planning covers a continually extending field of work because of the large number of elements that enter into the growth of cities and towns and the new factors that are constantly arising. Hence, it is necessary to keep legislation up to date and to confer with the provinces regarding improvements and amendments needed.

Apart from Ontario, Quebec and British Columbia, we have up-to-date legislation in Canada but in the three provinces named negotiations must be continued to get proper town planning Acts on the statute books. The Quebec Government still have the matter under consideration and continued effort is necessary. The Branch is co-operating with the members of the Government and last year the Act passed its first reading. Now that the war is over there is more interest being taken in the matter and any delay is due to lack of time on the part of the Government and not to lack of conviction of the desirability of town planning. In Ontario there is a Town Planning and Development Act but it is not satisfactory to the municipalities. The Branch is acting in co-operation with the Government with a view to getting the Act amended and enlarged in scope. Even if this is accomplished in the coming session there will be a good deal of work to be done during the year in preparation of the necessary regulations. It is possible, however, that, owing to the Government of Ontario being new in office, it may be next session before the Act is improved along the lines being advocated. In British Columbia it is necessary to continue negotiations with the Government as we have not yet obtained legislation in that province. In the other provinces, while we have the legislation, we have to continue to advocate for its effective administration and to give assistance in drafting regulations and advising municipalities.

In all this work the Branch is acting in co-operation with the provincial governments.

### Expert Advice to Government Departments and Municipalities

The activities of this Branch are continually being widened owing to the demands of different departments of the Federal Government, the Provincial Governments, and municipalities, for assistance in dealing with town planning problems. Advice is likely to be required in the coming year in connection with Federal departments as follows:—

Department of Public Health—Administration of Federal Housing Project.

Department of the Interior—Planning of Jasper and other townsites; also regional planning of areas in connection with water power developments.

Department of Public Works—Co-operation in planning of site of Government Buildings in Ottawa with the consulting architect and chief architect of the Department.

In co-operation with the Provincial Governments the Branch has been assisting and will continue to assist in the preparation of plans for Greater Halifax, St. John (N.B.), Borden (P.E.I.), and other cities.

The requests received from municipalities for assistance in preparing town planning schemes are very numerous. The whole of the time of a much larger

staff could be employed if compliance were to be made with all these requests.

### Studies and Investigations on Housing and Town Planning Conditions

The investigations which have been begun this year by Captain Ferguson into the industrial developments of the largest cities in the country will be completed and the tendencies towards industrial decentralization should be continued. These investigations will provide us with valuable information regarding the direction in which population is becoming distributed and regarding the factors which are causing industries to move from one district to another.

The Branch is also continuing investigations into the housing problem which has taken up a considerable part of the time during the past three years. It presents such great difficulties and complexities as to require continuous study. The problem is not now confined to bad conditions in the big cities but to shortage of good houses in all cities and towns and a need for improvement in the methods of planning and construction.

A leading part has been taken in promoting a movement to develop regional plans for industrial areas such as the area comprised in the Niagara district which centres round the power development of Niagara Falls. This movement is involving a good deal of research work and is already leading to good results and widespread interest.

Reports and papers will have to be prepared to meet part of the great demand which the Branch has for information, articles, papers for conferences, etc.

The Branch has been co-operating, and will require to continue to co-operate with the universities and the Town Planning Institute, in developing education in town planning.

Other research work during the coming year will include further investigation into assessment and taxation, particularly in the western cities where acute problems are arising in connection with these matters.

Work has to be limited to giving general advice, to carrying on educational work in some of the leading municipalities and to advising as to the procedure which should be followed. Help may have to be given during the coming year to the cities of Hamilton, Border Cities, London, Peterborough, and several western cities. As the Branch has no direct responsibility in advising municipalities and can only do so with the approval of the province, efforts have to be confined to general advice and education. This work will keep the Branch fully employed during the year, along with the work connected with legislation.

### Expert Advice in Connection with Development of New Towns

This work must in future be confined to correspondence and reports on general principles. The detail planning of new developments should be left to those engaged in special work as it is impossible for this Branch to undertake more than has already been done in this way of planning one or two examples, such as the Kipawa scheme.

It is also desirable to encourage professional practice in town planning so as to gradually build up a skilled profession in the country, capable of dealing with the immense problems and numerous schemes in the future.